



# KANSAS HANDWRITING CURRICULAR STANDARDS





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## Acknowledgements

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The Kansas Handwriting Standards Committee was carefully chosen to represent various populations of students across Kansas. Representation of the committee members expertise are: urban and rural, geographic, early childhood through higher education, English language learners, special education, career and technical education, occupational therapist, reading specialist and public and private school.

### Kansas Handwriting Curricular Standards Committee

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The committee incorporated much of the work done during the Handwriting for 21st Century Educational Summit to inform the Kansas Handwriting Standards. Researchers and educators gathered in Washington, DC, on January 23, 2012, for Handwriting in the 21st Century Educational Summit. This Summit further crystallized the need for educators and policy makers to give handwriting and keyboarding serious attention. Most participants concurred that there is a clear need for a set of benchmarked, developmentally appropriate handwriting standards that will provide all students with equal access to this foundational skill. (More information about the Summit and the research presented there is available online at [www.hw21summit.com](http://www.hw21summit.com).) The resulting set of national standards for written-language production offers developmentally appropriate, research-based indicators to integrate handwriting into the curriculum. The Kansas Handwriting Standards Committee used the national standards for written-language production as a starting point in development of the Kansas Handwriting Standards.

<sup>1</sup>Much of the content of this document is borrowed, with permission, from Zaner-Bloser's *Written-Language Production Standards for Handwriting and Keyboarding* (2012).

## Introduction: From Crayons to Handwriting

Children need handwriting instruction to succeed in their schools and later in the world of college and work. Yet explicit, evidence-based guidelines for teaching these skills are absent from the Kansas English Language Arts and Literacy College and Career Ready Standards (CCRS). Although the Kansas English Language Arts and Literacy CCRS provide a solid framework for students to achieve 21st century success, the standards cannot realistically include every skill necessary for achieving this goal. Developed with a “focus on results rather than means,” the standards thus empower educators to integrate any additional relevant topics that will help achieve the objectives set out in the Kansas English Language Arts and Literacy CCRS (National Governors Association Center for Best Practices, Council of Chief State School Officers, 2010).

Young children see the adults in their lives writing to connect with others and to share information and thoughts. Handwriting has its foundations in small muscle development and coordination as well as eye-hand coordination. The basic ability to hold a ‘writing tool’ to make a mark on paper is a beginning—leading toward meaningful communication. In order for written communication to make sense, children need to have alphabetic knowledge, print knowledge and other literacy knowledge. Therefore, the handwriting standards are built from the Kansas Early Learning Standards in the fine motor area (physical health domain) and the communication and literacy domain, showing the connection of physical development and literacy learning. It is also critical to remember that there is a developmental continuum of learning and ability that needs to be considered as the skill of handwriting is taught. Children are eager to learn and eager to share their understanding of their world. Writing can help this happen, beginning with emergent writing and resulting in meaningful communication with peers and adults.

The national discussion around handwriting and keyboarding instruction in particular has been elevated since the release of the Common Core Standards in 2010. With this in mind, the Kansas State Board of Education proceeded with discussions around this topic. After reviewing information from a state-wide survey about handwriting instruction and research from the National Association of State Boards the Education, the Kansas State Board of Education asked that a set of Kansas Handwriting Standards be written for Kansas educators. The focus of these standards is handwriting because Kansas already has technology standards that address keyboarding.

This statement from the Kansas State Board of Education validates the direction for writing these standards. The Kansas State Board of Education believes that cursive handwriting as a student skill still holds an important place in the instructional practice of every school’s curriculum and can be integrated in multiple content areas. Research supports the role that handwriting instruction plays in the cognitive development of children and this activity is even more important in an increasingly digital environment. The Board expects educators to ensure that all students can write legibly in cursive and comprehend text written in this manner.

The Kansas Board of Education believes that cursive handwriting as a student skill holds an important place in the instructional practice of every school’s curriculum and can be integrated in multiple content areas. Research supports the role that handwriting instruction plays in the cognitive development of children and this activity is even more important in an increasingly digital environment. The Board expects educators to ensure that all students can write legibly in cursive and comprehend text written in this manner.

# Handwriting

Handwriting and written composition are two different processes. While handwriting can facilitate the physical act of writing, it does not determine the effectiveness of the writer's ability to formulate and express ideas and information through written communication. In other words, handwriting becomes a tool to be used by the writer to communicate.

Handwriting is a foundational skill crucial for literacy success. It teaches letter formation and supports reading and language acquisition. Additionally, through perceptual and motor skills practice, handwriting advances neurological development and augments writing automaticity.

Learning to write the manuscript letters of the alphabet leads directly to reading acquisition. According to the National Reading Panel, letter knowledge and phonemic awareness are the two best predictors of reading proficiency. Writing letters by hand has been proven to help children recognize and remember letters more easily than if they typed them (James, 2012; Longcamp et al., 2005; Berninger et al., 2002, 2006; NICHD, 2000).

Writing by hand engages the brain in learning. Through modern brain-imaging techniques, researchers have found that neural activity in children who practiced manuscript by hand was far more advanced than in children who just looked at the letters. Handwriting, based on empirical evidence from neuroscience, seems to play a large role in the visual recognition and learning of letters (James & Atwood, 2009; James & Gauthier, 2006; James, Wong, & Jobard, 2010; Longcamp et al., 2008).

Students write most assignments and tests by hand. A 2008 study showed that older students produce at least half of their writing for school by hand. Younger students handwrite nearly 90 percent of their schoolwork. Even in the Common Core State Standards (Appendix C) document, for example, almost half of the sample K–8 student essays are handwritten (Denton, Cope, & Moser, 2006; Cutler & Graham, 2008).

Standardized essay scores are influenced by handwriting. More troubling, solid research finds that handwritten tests are graded differently based on the legibility of the handwriting (Graham & Harris, 2002; Conti, 2012; Vander Hart et al., 2010). Poor handwriting can drop a paper from the 50th percentile to the 10th or 22nd percentile (Graham, Harris, & Herbert, 2011). Essay graders of handwritten standardized tests read more than 100 essays an hour, making legibility even more important (ACT, 2011).

*Handwriting instruction facilitates effective written composition and communication, which is the ultimate goal.*

(Center on Enhancing Early Learning Outcomes, 2013)

Handwriting instruction supports automaticity, speed and output. When students develop the fine motor skills that accompany learning to write by hand, their speed and output increase (Graham & Harris, 2005; Graham & Weintraub, 1996). Additionally, with consistent handwriting practice, the processes involved become less demanding and more automatic, enabling students to devote a higher amount of neurological resources to critical thinking and thought organization (Peeverly, 2012). Students require manuscript handwriting skills in order to become accustomed to the common letterforms in books and environmental text. Cursive handwriting skills are necessary for students to decipher teachers' comments on written assignments, to pen their signatures and to read a variety of historical documents—including the founding papers of the United States of America. As students become acquainted with both manuscript and cursive handwriting, they are better able to determine their preference for the handwriting style (manuscript, cursive or manuscript-cursive hybrid) that best serves them in terms of speed, automaticity and output for notetaking, in-class assignments and high-stakes tests.

Handwriting fluency continues to develop past the early grades. Studies show that handwriting instruction improves legibility and fluency through grade 9; in addition, the overall quality of writing and the length of writing passages increase through grade 9 with handwriting instruction (Graham & Santangelo, 2012).

Knowing how to produce letters automatically allows for writing to be quick, smooth and effortless. A lack of automaticity results in students focusing on letter production, rather than the process of conveying ideas (Bourdin and Fayol, 1994; Berninger, Vaughan, Graham, Abbott, Abbott and Rogan, 1997).

## Why do these standards not include keyboarding?

The Kansas Board of Education saw a need to focus on handwriting. This is not to diminish the importance of students learning keyboarding skills but to strike a balance of instruction for both handwriting and keyboarding.

Kansas provides standards for keyboarding in the *Kansas Model Curricular Standards for Library Media and Technology* adopted June 13, 2007. These standards are in the Technology Literacy strand and begin at Kindergarten and continue through fourth grade.

### Kansas Model Curricular Standards for Library Media and Technology

#### Technology Literacy

**Standard 10:** The student understands basic operations and concepts.

**Benchmark 1:** The student demonstrates a sound understanding of the nature of operation of technology systems.

1. uses input/output devices to successfully operate technology.

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade
1. identify letters on a keyboard.	1. use a mouse and keyboard appropriately.	1. name parts of a computer and print documents.	1. use the keyboard in a structured program for teaching typing skills (e.g., home row, basic symbols and capital letters).	1. use the keyboard in a structured program for teaching typing skills (e.g., coverage of the entire keyboard).
2. create documents using a keyboard.				2. create documents using a keyboard.

The *Kansas Model Curricular Standards for Library Media and Technology* can be found on the Kansas State Department of Education’s website at the following URL: [www.ksde.org](http://www.ksde.org)

There are several national standards to support keyboarding. Among of these standards are the following:

- Computer Science Teachers Association - <http://csta.acm.org/Curriculum/sub/K12Standards.html>
- International Society for Technology in Education - <http://www.iste.org/standards/nets-for-students>
- International Technology and Engineering Educators Association - [http://www.iteea.org/TAA/Publications/TAA\\_Publications.html](http://www.iteea.org/TAA/Publications/TAA_Publications.html)

Likewise, the *Kansas English Language Arts and Literacy College and Career Ready Standards*, adopted Oct. 2010, also support the use of technology in a writing process.

**Kansas College and Career Ready Standards for English Language Arts and Literacy in History/Social Studies, Science and Technical Subjects**

**Writing Strand**

**Production and Distribution of Writing**

**Writing Anchor Standard 6** – Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Grade 3	Grade 4	Grade 5	Grade 6
<p><b>Standard 6.</b> With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others.</p>	<p><b>Standard 6.</b> With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.</p>	<p><b>Standard 6.</b> With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of two pages in a single sitting.</p>	<p><b>Standard 6.</b> Use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of three pages in a single sitting.</p>

The *Kansas English Language Arts and Literacy College and Career Ready Standards* are also available on the Kansas State Department of Education’s website at the following URL: [www.ksde.org](http://www.ksde.org)

# The Kansas Handwriting Standards for Birth to Five Years Old

## Crayons to Handwriting: At the Beginning

Young children see the adults in their lives using writing to connect with others and to share information and thoughts. Handwriting has its foundations in small muscle development and coordination as well as eye-hand coordination. The basic ability to hold a 'writing tool' to make a mark on paper is a beginning—leading toward meaningful communication. In order for written communication to make sense, children need to have alphabetic knowledge, print knowledge and other literacy knowledge. Therefore, the handwriting standards are built from the Kansas Early Learning Standards in the fine motor area (physical health domain) and the communication and literacy domain, showing the connection of physical and literacy learning as well as promoting the view that there is a developmental continuum of learning and ability that needs to be considered as the skill of handwriting is taught. Children are eager to learn and eager to share their understanding of their world. Writing, if taught and supported appropriately, can help this happen, beginning with emergent writing and resulting in meaningful communication with peers and adults.

Physical development, with a special focus on fine motor skills, is a developmental domain that includes necessary precursors to handwriting such as:

- small muscle development and coordination;
- Eye-hand coordination;
- ability to hold writing tools properly; and
- ability to form basic strokes.

These skills are critical to holding writing utensils as well as gaining the strength to not only make marks on paper or other materials, but to control the writing device so that the marks are intentional and meaningful, at first to the child, but later to other readers.

Communication and Literacy, another domain critical to the development of handwriting skills, includes several skills that help make that meaningful message or intentional letters. For example:

- letter recognition; and
- understanding of printed language.

It is also important to note that print concepts are developed prior to and in conjunction with handwriting skills. The coordination of learning and skill between using physical development/fine motor and understanding and using the literacy skills results in intentional written communication.

Birth to Age Five Handwriting:

Kansas Early Learning Standards:		PHYSICAL HEALTH AND DEVELOPMENT (PHD)				
		Young Infant: "i" (By 8 months)	Mobile Infant: "mi" (By 18 months)	Toddler: "t" (By 36 months)	Pre 3: "p3" (By 48 months)	Pre 4: "p4" (By 60 months)
<b>FINE MOTOR SKILLS</b>	<b>PHD.i.4:</b> Transfers object from one hand to other.	<b>PHD.mi.4:</b> Coordinates the use of arms, hands and fingers to accomplish tasks (drinks from bottle, cup by self, holds a spoon).	<b>PHD.t. 4:</b> Coordinates the use of arms, hands and fingers to accomplish more complex tasks (e.g., uses a spoon to scoop up food and bring it to mouth, makes snips on a piece of paper, unbuttons large buttons).	<b>PHD.p3.2:</b> Uses classroom and household tools independently and with eye-hand coordination to carry out more complex activities (e.g., uses fork and spoon to eat, manages large buttons, uses scissors to cut out simple shapes).	<b>PHD.p4.4:</b> With fluency and accuracy uses classroom and household tools independently and with eye-hand coordination to carry out activities (e.g., uses scissors to cut out shapes, zips, snaps and buttons to dress self).	
	<b>PHD.i.5:</b> Grasps and releases object using entire hand.	<b>PHD.mi.5:</b> Coordinates eye-hand movements, such as putting things in a box.				

Kansas Early Learning Standards:		COMMUNICATIONS AND LITERACY STANDARDS (CL)				
		Young Infant: "i" (By 8 months)	Mobile Infant: "mi" (By 18 months)	Toddler: "t" (By 36 months)	Pre 3: "p3" (By 48 months)	Pre 4: "p4" (By 60 months)
<b>■ Production and Distribution of Writing</b>						
<b>WRITING: CL.W.</b>	N/A	N/A	N/A	<b>CL.W.p3.2:</b> Uses consistent marks to represent name when writing.	<b>CL.W.p4.2:</b> Recognizably writes a majority of the letters in their name.	
				<b>CL.W.p3.3:</b> With guidance and support, imitates shapes and strokes.	<b>CL.W.p4.3:</b> With guidance and support, responds to questions and suggestions and adds details to drawings or emergent writing as needed.	
				<b>CL.W.p3.4:</b> With guidance and support, explores a variety of digital tools to express ideas (e.g., asks for help searching the internet for pictures of animals to illustrate a book "My Favorite Animals").	<b>CL.W.p4.4:</b> With guidance and support, explores a variety of digital tools to produce and publishes emergent writing (e.g., uses the class camera to record the growth of the class garden; asks for help searching the internet for pictures of animals to illustrate a book or directions for a task).	

# Anchor Standards for Handwriting – Kindergarten to Sixth Grade

The K–6 standards on the following pages define what students should understand and do by the end of each grade. They correspond to the anchor standards below by number. The anchor and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students should demonstrate when producing handwritten text.

## Anchor Standards for Handwriting

### Form and Production

1. Demonstrate an understanding of the organization and basic features of manuscript writing.
2. Demonstrate an understanding of organization and basic features of cursive writing.

### Automaticity

3. Produce handwritten text with sufficient flow, ease and speed to support legibility and effective communication.

### Writing Application

4. Applying handwriting skills appropriate to grade level, task and audience to produce written text

## Standards for Grades Kindergarten to Sixth Grade

**Anchor Standard: Form and Production**

1. Demonstrate an understanding of the organization and basic features of manuscript writing.

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
1. Demonstrate an understanding of the organization and basic features of manuscript writing. <ol style="list-style-type: none"> <li>a. Print many upper- and lowercase letters with proper proportion and some reversals.</li> <li>b. Print numbers 0-20 with proper proportion and some reversals.</li> <li>c. With prompting and support, print words and numbers with appropriate spacing.</li> </ol>	1. Demonstrate an understanding of the organization and basic features of manuscript writing. <ol style="list-style-type: none"> <li>a. Print all upper- and lowercase letters with proper proportion and minimal reversals.</li> <li>b. Print numbers 0-120 with proper proportion and minimal reversals.</li> <li>c. Print words, sentences and numbers with appropriate spacing.</li> </ol>	1. Demonstrate an understanding of the organization and basic features of manuscript writing. <ol style="list-style-type: none"> <li>a. Print all upper- and lowercase letters with proper proportion and minimal reversals.</li> <li>b. Print numbers 0-1000 with proper proportion and minimal reversals.</li> <li>c. Print words, sentences and numbers with appropriate spacing.</li> </ol>	1. Produce words, sentences, paragraphs and numbers with proper proportion and spacing on standard lined paper using manuscript writing.	1. Maintain legible manuscript writing with proper proportion and spacing on standard lined paper.	1. Maintain legible manuscript writing with proper proportion and spacing on standard lined paper.	1. Maintain manuscript writing with proper proportion and spacing on standard lined paper. <ol style="list-style-type: none"> <li>a. Use an adaptive but legible manuscript-cursive hybrid when appropriate.</li> </ol>

**Anchor Standard: Form and Production**

1. Demonstrate an understanding of the organization and basic features of manuscript writing.

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
<p>d. With prompting and support, use end punctuation for sentences (period, exclamation mark and question mark).</p> <p>e. With prompting and support, display and use correct pencil grip (pointer and thumb finger grasp).</p> <p>f. Print basic manuscript lines (line, slant, curve, circle).</p> <p>g. Form lines and letters following organization models (left to right, top to bottom).</p> <p>h. Begin capital letters and tall letters on top line and end on bottom line.</p> <p>i. Begin short letters on middle line and end on bottom line.</p> <p>j. Begin letters with tails on the middle line and have them reach below the baseline.</p>	<p>d. Use end punctuation for sentences.</p> <p>e. Display and use correct pencil grip (pointer and thumb finger grasp).</p>	<p>d. Use end punctuation for sentences.</p> <p>e. Display and use correct pencil grip (pointer and thumb finger grasp).</p>				

**Anchor Standard: Form and Production**

2. Demonstrate an understanding of the organization and basic features of cursive writing.

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
(Begins in Third Grade)	(Begins in Third Grade)	(Begins in Third Grade)	2. Demonstrate an understanding of the organization and basic features of cursive writing. <ul style="list-style-type: none"> <li>a. Form upper- and lowercase cursive letters with proper proportion.</li> <li>b. Form cursive numerals.</li> <li>c. Form cursive words with appropriate spacing between letters and form sentences with appropriate spacing between words.</li> <li>d. Create basic cursive lines (e.g. undercurve, downcurve, overcurve, slant).</li> <li>e. Form letters in cursive using consistent slant.</li> <li>f. Form joinings to connect letters, maintaining proportion of letters to joinings.</li> </ul>	2. Produce words, sentences, paragraphs and numbers with proper proportion and spacing on standard lined paper using cursive writing.	2. Maintain legible cursive writing with proper proportion and spacing on standard lined paper.	2. Maintain legible manuscript and cursive writing with proper proportion and spacing on standard lined paper. <ul style="list-style-type: none"> <li>a. Use an adaptive but legible manuscript-cursive hybrid when appropriate.</li> </ul>

**Anchor Standard: Automaticity**

3. Write with sufficient flow, ease and speed to support legibility and effective communication.

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
3. By the end of the year, write with sufficient flow, ease and speed to support legibility and effective communication with appropriate scaffolding.	3. By the end of the year, write with sufficient flow, ease and speed to support legibility and effective communication with appropriate scaffolding.	3. By the end of the year, write with sufficient flow, ease and speed to support legibility and effective communication with appropriate scaffolding.	3. By the end of the year, write with sufficient flow, ease and speed to support legibility and effective communication with appropriate scaffolding.	3. By the end of the year, write with sufficient flow, ease and speed to support legibility and effective communication with appropriate scaffolding.	3. By the end of the year, write with sufficient flow, ease and speed to support legibility and effective communication with appropriate scaffolding.	3. By the end of the year, write with sufficient flow, ease and speed to support legibility and effective communication with appropriate scaffolding.

**Anchor Standard: Writing Application**

4. Develop handwriting stamina by producing written text appropriate to grade level, task and audience.

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
4. By the end of the year, develop handwriting stamina by producing written text relevant to task and audience with appropriate scaffolding.	4. By the end of the year, develop handwriting stamina by producing written text relevant to task and audience with appropriate scaffolding.	4. By the end of the year, develop handwriting stamina by producing written text relevant to task and audience with appropriate scaffolding.	4. By the end of the year, develop handwriting stamina by producing written text relevant to task and audience with appropriate scaffolding.	4. By the end of the year, develop handwriting stamina by producing written text relevant to task and audience with appropriate scaffolding.	4. By the end of the year, develop handwriting stamina by producing written text relevant to task and audience with appropriate scaffolding.	4. By the end of the year, develop handwriting stamina by producing written text relevant to task and audience with appropriate scaffolding.

## Standards for Third Grade to Sixth Grade

**Anchor Standard: Form and Production**

1. Demonstrate an understanding of the organization and basic features of manuscript writing.

Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
1. Produce words, sentences, paragraphs and numbers with proper proportion and spacing on standard lined paper using manuscript writing.	1. Maintain legible manuscript writing with proper proportion and spacing on standard lined paper.	1. Maintain legible manuscript writing with proper proportion and spacing on standard lined paper.	1. Maintain manuscript writing with proper proportion and spacing on standard lined paper. a. Use an adaptive but legible manuscript-cursive hybrid when appropriate.

1. Demonstrate an understanding of the organization and basic features of cursive writing.

Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
2. Demonstrate an understanding of the organization and basic features of cursive writing. a. Form upper- and lowercase cursive letters with proper proportion. b. Form cursive numerals. c. Form cursive words with appropriate spacing between letters and form sentences with appropriate spacing between words. d. Create basic cursive lines (e.g. under-curve, downcurve, overcurve, slant). e. Form letters in cursive using consistent slant. f. Form joinings to connect letters, maintaining proportion of letters to joinings.	2. Produce words, sentences, paragraphs and numbers with proper proportion and spacing on standard lined paper using cursive writing.	2. Maintain legible cursive writing with proper proportion and spacing on standard lined paper.	2. Maintain legible manuscript and cursive writing with proper proportion and spacing on standard lined paper. a. Use an adaptive but legible manuscript-cursive hybrid when appropriate.

**Anchor Standard: Automaticity**

3. Write with sufficient flow, ease and speed to support legibility and effective communication.

Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
3. By the end of the year, write with sufficient flow, ease and speed to support legibility and effective communication with appropriate scaffolding.	3. By the end of the year, write with sufficient flow, ease and speed to support legibility and effective communication with appropriate scaffolding.	3. By the end of the year, write with sufficient flow, ease and speed to support legibility and effective communication with appropriate scaffolding.	3. By the end of the year, write with sufficient flow, ease and speed to support legibility and effective communication with appropriate scaffolding.

**Anchor Standard: Writing Application**

4. Develop handwriting stamina by producing written text appropriate to grade level, task and audience.

Third Grade	Fourth Grade	Fifth Grade	Sixth Grade
4. By the end of the year, develop handwriting stamina by producing written text relevant to task and audience with appropriate scaffolding.	4. By the end of the year, develop handwriting stamina by producing written text relevant to task and audience with appropriate scaffolding.	4. By the end of the year, develop handwriting stamina by producing written text relevant to task and audience with appropriate scaffolding.	4. By the end of the year, develop handwriting stamina by producing written text relevant to task and audience with appropriate scaffolding.

## Appendix A: Glossary

**Automaticity:** is the ability to do things without occupying the mind with the low-level details required, allowing it to become an automatic response pattern or habit. It is usually the result of learning, repetition and practice. Knowing how to produce letters automatically allows for writing to be quick, smooth and effortless.

**Cursive:** (of handwriting) in flowing strokes with the letters joined together.

**Form: basic structure:** the shape or structure of a letter that gives it its distinctive character

**Handwriting: writing done by hand:** writing done by hand using a pen or pencil

**Manuscript:** letters that are written that are not joined together to form words as opposed to cursive letters which are joined together to create words

**Print:** use a pencil or pen to place letters on paper to form words that are not joined

**Scaffolding:** used by teachers to move students beyond their current developmental stage or skill set and into progressively more difficult tasks

## Appendix B: Selected Bibliography

- American College Testing. (2011). *Scoring guidelines*. Retrieved from <http://www.actstudent.org/writing/scores/guidelines.html>
- Barrera III, M.T., Rule, A.C. & Diemart, A. (2001). The effect of writing with computers versus handwriting on the writing achievement of first-graders. *Information Technology in Childhood Education Annual*, 2001(1), 215–229.
- Berninger, V.W. (2012). Evidence-based, developmentally appropriate writing skills K to 5: Teaching the orthographic loop of working memory to write letters so developing writers can spell words and express ideas. Paper presented at Handwriting in the 21st Century? An Educational Summit, Washington, DC, January 23, 2012.
- Berninger, V.W., Abbott, R.D., Abbott, S.P., Graham, S., & Richards, T. (2002). Writing and reading: Connections between language by hand and by eye. *Journal of Learning Disabilities*, 35, 39–56.
- Berninger, V.W., Abbott, R.D., Jones, J., Wolf, B., Gould, L., Anderson-Youngstrom, M., et al. (2006). Early development of language by hand: Composing, reading, listening and speaking connections; three letter-writing modes; and fast mapping in spelling. *Developmental Neuropsychology*, 29(1), 61–92.
- Berninger, V.W., Abbott, R.D., Augsburger, A. and Garcia, N. (2009). Comparison of pen and keyboard transcription modes in children with and without learning disabilities. *Learning Disability Quarterly*, 32(3), 11–18.
- Conti, G. E. Handwriting characteristics and the prediction of illegibility in 3rd and 5th grade students. Paper presented at Handwriting in the 21st Century? An Educational Summit, Washington, DC, January 23, 2012.
- Cook, C., & Bennett, L. (2007). Does using a computer disturb the organization of children’s writing? *British Journal of Developmental Psychology*, 25, 313–321.
- Cutler, L., & Graham, S. (2008). Primary grade writing instruction: A national survey. *Journal of Educational Psychology*, 100(4), 907–919.
- Denton, P.L., Cope, S., & Moser, C. (2006). The effects of sensorimotor- based intervention versus therapeutic practice on improving handwriting performance in 6- to 11-year-old children. *American Journal of Occupational Therapy*, 60, 16–27.
- Goldberg, A., Russell, M., & Cook, A. (2003). The effect of computers on student writing: A meta-analysis of studies from 1992 to 2002. *Journal of Technology, Learning and Assessment*, 2(1), 3–50.
- Grabowski, J. (2008). The internal structure of university students’ keyboard skills. *Journal of Writing Research*, 1(1), 27–52.
- Graham, S., & Harris, K. (2005). Improving the writing performance of young struggling writers: Theoretical and programmatic research from the Center on Accelerating Student Learning. *Journal of Special Education*, 39(1), 24–26.
- Graham, S., & Harris, K. (2002). *Prevention and intervention for struggling writers*. In M. R. Shinn (Ed.), *Interventions for academic and behavior problems II: Preventative and remedial approaches* (pp. 589–610). Washington, DC: National Association of School Psychologists.
- Graham, S., & Weintraub, N. (1996). A review of handwriting research: Progress and prospects from 1980 to 1994. *Educational Psychology Review*, 8, 7–87.
- James, K.H. (2012). The neural correlates of handwriting and its effect on reading acquisition. Paper presented at Handwriting in the 21st Century? An Educational Summit, Washington, DC, January 23, 2012.
- James, K.H., & Atwood, T.P. (2009). The role of sensorimotor learning in the perception of letter-like forms: Tracking the causes of neural specialization for letters. *Cognitive Neuropsychology*, 26(1), 91–110.
- James, K.H., & Gauthier, I. (2006). Letter processing automatically recruits a sensory-motor brain network. *Neuropsychologia*, 44, 2937–2949.
- James, K.H., Wong, C-N, & Jobard, G. (2010). The case for letter expertise. In Gauthier, I., Bub, D., & Tarr, M.J. (Eds.), *Perceptual expertise: Bridging brain and behavior* (305–331). New York, NY, Oxford University Press.

## Appendix B: Selected Bibliography (continued)

- Jones, D., & Christensen, C. A. (1999). The relationship between automaticity in handwriting and students' ability to generate written text. *Journal of Educational Psychology*, 91, 44–49.
- Longcamp, M., Zerbato-Poudou, M. and Velay, J. (2005). The influence of writing practice on letter recognition in preschool children: A comparison between handwriting and typing. *Acta Psychologica*, 119, 67–79.
- Longcamp, M., Boucard, C., Gilhodes, J., Anton, J., Roth, M., Nazarian, B., et al. (2008). Learning through hand- or typewriting influences visual recognition of new graphic shapes: Behavioral and functional imaging evidence. *Journal of Cognitive Neuroscience*, 20(5), 802–815.
- National Assessment of Educational Progress. (2011, December 7). *NAEP writing computer-based assessment*. Retrieved from <http://nces.ed.gov/nationsreportcard/writing/cba.asp>
- National Governors Association Center for Best Practices, Council of Chief State School Officers. (2010). *Common Core State Standards for English Language Arts: Introduction*. Washington, DC.
- National Institute of Child Health & Human Development (NICHD). (2000). *Report of the National Reading Panel: Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. (NIH Publication No. 004769). Washington, DC: U. S. Government Printing Office.
- Peverly, S. (2012). The relationship of transcription speed and other cognitive variables to note-taking and test performance. Paper presented at Handwriting in the 21st Century? An Educational Summit, Washington, DC, January 23, 2012.
- Silvernail, D. L., Pinkham, C. A., Wintle, S. E., Walker, L. C., & Bartlett, C. L. (2011). *A middle school one-to-one laptop program: The Maine experience*. Center for Education Policy, Applied Research, & Evaluation, University of Southern Maine. Retrieved from <http://www.usm.maine.edu/cepare/maine-learning-technology-initiative-mlti>
- Suhr, K. A., Hernandez, D. A., Grimes, D., & Warschauer, M. (2010). Laptops and fourth-grade literacy: Assisting the jump over the fourth-grade slump. *Journal of Technology, Learning and Assessment*, 9, 4–45.
- Vander Hart, N., Fitzpatrick, P., & Cortesa, C. (2010). In-depth analysis of handwriting curriculum and instruction in four kindergarten classrooms. *Reading and Writing*, 23, 673–399.
- Warschauer, M. (2008). Laptops and literacy: A multi-site case study. *Pedagogies: An International Journal*, 3, 52–67.
- Zaner-Bloser. (2012). *Written-language production standards for handwriting and keyboarding*. Retrieved from [http://www.hw21summit.com/media/zb/hw21/Written-Language\\_ProductionStandards.pdf](http://www.hw21summit.com/media/zb/hw21/Written-Language_ProductionStandards.pdf)









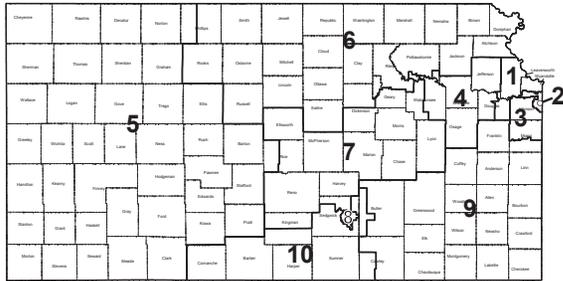
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